

**LOUISVILLE METRO AIR POLLUTION CONTROL DISTRICT
PRELIMINARY REGULATORY IMPACT ASSESSMENT**

REGULATION 6.40 VERSION 4
*Standards of Performance for Gasoline Transfer to Motor Vehicle
(Stage II Vapor Recovery and Control Systems)*

APRIL 11, 2016

Purpose of the Draft Proposed Action:

On May 16, 2012, the U.S. Environmental Protection Agency (EPA) determined that onboard refueling vapor recovery (ORVR) technology is in widespread use throughout the motor vehicle fleet of the U.S. for purposes of controlling motor vehicle refueling emissions, thereby eliminating the requirement for certain areas to continue implementing Stage II gasoline vapor recovery and control (Stage II) systems at gasoline dispensing facilities.¹

The District is now proposing to discontinue the requirements to install and maintain Stage II systems in Regulation 6.40, *Standards of Performance for Gasoline Transfer to Motor Vehicle (Stage II Vapor Recovery and Control Systems)*, at new and existing gasoline dispensing facilities. The proposed draft removes the requirement that Stage II vapor recovery technology be installed in new gasoline dispensing facilities; authorizes existing gasoline dispensing facilities to begin decommissioning their Stage II controls; and establishes requirements and procedures for decommissioning existing Stage II controls by December 31, 2018.

If adopted by the Louisville Metro Air Pollution Control Board (Board), the District will submit Regulation 6.40 Version 4 to the EPA for inclusion in the Jefferson County portion of the Kentucky State Implementation Plan (SIP).

Scope of the Draft Proposed Amendments:

A. Stage II Background

When gasoline-powered vehicles are re-fueled, liquid gasoline entering the tank forces vapors containing volatile organic compounds (VOCs) out of the empty portion of the tank.^{2,3} If not

¹ *Air Quality: Widespread Use for Onboard Refueling Vapor Recovery and Stage II Waiver*; 77 Fed. Reg. 28772 (May 16, 2012) (Final Rule).

² These VOCs include, but are not limited to, benzene, toluene, ethylbenzene, and xylene.

controlled by some type of air pollution control, these vapors react with sunlight, nitrogen oxides, and other VOCs in the ambient air to form ground-level ozone.

As part of the Clean Air Act Amendments of 1990, Congress established a two-pronged approach to control emissions of these VOCs during refueling. Under the first prong, Stage II systems were required to be installed at gasoline dispensing facilities in areas: (1) designated serious, severe, or extreme ozone nonattainment, (2) in the Ozone Transport Region (OTR),⁴ and (3) where Stage II requirements were adopted to address moderate ozone nonattainment designations or maintenance issues. Regulation 6.40 falls into this latter category. It is a maintenance measure designed to assure continued attainment of the 1-hour ozone standard.⁵

Under the second prong, vehicle manufacturers were required to phase-in ORVR on new vehicles beginning in 1998, with full implementation by 2006.⁶ As intended by Congress,⁷ ORVR and Stage II systems are redundant; therefore, the EPA has now determined that Stage II systems may now be eliminated. This is important because there is an inherent incompatibility between ORVR and Stage II that reduces the benefit of using Stage II once ORVR use reaches about 75 percent.⁸ After this point, VOC emissions increase and the environmental benefit of using both systems is lost.⁹

B. Jefferson County Stage II Systems and ORVR Control

Regulation 6.40 applies to new and existing gasoline dispensing facilities in Jefferson County, Kentucky. Capital costs to install Stage II range from \$20,000 to construct a brand new gasoline dispensing facility to over \$30,000 to retrofit an existing gasoline dispensing facility. Once installed, maintaining the Stage II equipment, including required testing, reporting, and recordkeeping, costs about \$3,000 per gasoline dispensing facility each year.¹⁰

Certain gasoline dispensing facilities, such as those with monthly throughput less than 10,000 gallons of gasoline, those with monthly throughput less than 25,000 gallons and owned or

³ 77 Fed. Reg. 28772, 28773.

⁴ The OTR consists of a group of northeastern states that include Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, and the Washington, D.C. Metropolitan Statistical Area, including the northern Virginia suburbs.

⁵ Regulation 6.40 (August 18, 1993) was incorporated in the SIP on October 23, 2001; see also *Approval and Promulgation of Implementation Plans and Designation of Areas for Air Quality Planning Purposes; KY and IN*, 66 Fed. Reg. 33505, 33514 (June 22, 2001) (Proposed Rule), which details the role of Regulation 6.40 in the District's maintenance plan.

⁶ See 77 Fed. Reg. 28774 for an explanation of how ORVR controls VOC emissions from refueling.

⁷ U.S. Environmental Protection Agency Office of Air Quality Planning and Standards. (2012). *Guidance on Removing Stage II Gasoline Vapor Control Programs from State Implementation Plans and Assessing Comparable Measures* (EPA-457/B-12-001), p.1.

⁸ 77 Fed. Reg. 28772, 28775.

⁹ U.S. Environmental Protection Agency Office of Air Quality Planning and Standards. (2012). *Guidance on Removing Stage II Gasoline Vapor Control Programs from State Implementation Plans and Assessing Comparable Measures* (EPA-457/B-12-001), p. 10.

¹⁰ U.S. Environmental Protection Agency Office of Air Quality Planning and Standards. (2012). *Guidance on Removing Stage II Gasoline Vapor Control Programs from State Implementation Plans and Assessing Comparable Measures* (EPA-457/B-12-001), p. 22.

operated by an independent small business marketer of gasoline, most rental fleet refueling operations, and the initial fueling of new motor vehicles at a motor vehicle assembly facility, are currently exempt from the standards, testing, and permitting requirements of Regulation 6.40.¹¹ These facilities are, however, required to submit an annual report to the District each April verifying compliance with the applicable exemption criteria.¹²

Using guidance from the EPA, the District has demonstrated that the use of ORVR is in widespread use within the Jefferson County fleet as of January 2016. The proposed revisions are necessary to avoid increases in VOC emissions that result from the incompatibility between the ORVR technology and Stage II systems as new cars equipped with ORVR continue to enter the Jefferson County fleet.

Estimated Costs and Savings:

There are currently over 262 existing gasoline dispensing facilities in Jefferson County equipped with Stage II systems. These sources will incur a one-time cost to decommission their Stage II systems. For a gasoline dispensing facility with five multi-product dispensers, EPA has estimated this cost, including labor, hardware, parts, efforts necessary to complete administrative paperwork, and lost revenue at \$1,980.¹³ This cost is less than the EPA's estimated annual maintenance cost of nearly \$3,000 per gasoline dispensing facility. Once decommissioned, the cost of maintenance will become a recurring cost savings. The owners of new gasoline dispensing facilities will not incur any costs, but will benefit from the cost of not having to install or maintain Stage II systems.

Exempt gasoline dispensing facilities will no longer be required to maintain records and report their throughput to the District. This will also become a recurring cost saving.

Feasibility of All Alternatives:

A "no action" alternative is not appropriate in this case due to the inevitable increase in emissions in 2017 that results from the incompatibility between the two systems.

Comparison with Any Minimum or Uniform Standards:

The EPA has determined that ORVR systems are in widespread use in the motor vehicle fleet within the United States. As a result, the requirement of Clean Air Act section 182(b)(3) for Stage II vapor recovery systems may be waived.

¹¹ Regulation 6.40 sections 2.2.1, 2.2.2, 2.2.3, and 2.1.2, respectively.

¹² *Id.*

¹³ U.S. Environmental Protection Agency Office of Air Quality Planning and Standards. (May 8, 2012) *Final Regulatory Support Document Widespread Use for Onboard Refueling Vapor Recovery and Stage II Waiver: Decommissioning Stage II Vapor Recovery Financial Benefits and Costs*, p. 7.

Report on Public Outreach Efforts:

Drafts of proposed Regulation 6.40 Version 4, were proposed for formal review on April 11, 2016, and sent to: to all members of the Louisville Metro Air Pollution Control Board, all persons who have requested to be notified of proposed changes to any District regulations; EPA Region 4; and the Kentucky Division for Air Quality.

The public will have an opportunity to comment at a meeting of the appropriate committee of the Air Pollution Control Board, during the formal public comment period, and at a public hearing prior to consideration by the full Board.